AN ECONOMETRIC ANALYSIS OF THE FIRMS' FINANCIAL PERFORMANCE OVER THE SUSTAINABLE REPORTING FRAMEWORK: SRI LANKAN EVIDENCE

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Abstract

A sustainability report provides an advanced overview of a business by indicating its daily impacts on the economy, environment, and social aspects while focusing on the organizational value and governance model. This information helps the different stakeholder groups to evaluate the non-financial performance of listed companies. This paper aims to analyze the impact of economic, environmental, and social sustainability reporting framework on the financial performance of the banking and financial institutions in Sri Lanka. Accordingly, we collected data from all the listed banking and financial institutions from 2014 to2018. The OLS regression model was developed to analyze the variable relationship. The regression results confirmed that the economic sustainability indicators make a significant and negative impact on Return on Assets, and Tobin's Q. Parallelly, the environmental sustainability indicators impact positively and significantly only on Return on Assets. The social sustainability indicators have an insignificant impact on determining financial performance. The results confirmed that the sustainability framework enhances only the firms' asset performance compared to their equity returns. We also confirm a bidirectional causality between economic sustainability and ROA. At the same time, unidirectional causality between economic sustainability to Tobin's Q, Return on Assets to environmental sustainability, Return on Equity to environmental sustainability, and social sustainability to Return on Assets.

Keywords: Banking and Financial Institutions, Financial Performance, Sustainability Framework

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1. INTRODUCTION

The turbulence of the business environment, internationalization of markets, and volatility of market risks have heavily impacted the business's survival. Thus, businesses set both financial and non-financial key performance indicators to analyze their success at reaching their goals. Many studies (Mironiuc, et al., 2015; Ganga, et al., 2015; Chashmi & Fadaee, 2016) have identified the significance of having an upsurge in financial performance in a business throughout to ensure the sustainability and satisfaction of its stakeholders. Maintaining a trade-off between liquidity, solvency, and profitability is the pivotal dilemma of financial management. So, the efficiency of a firm's performance management can be illustrated by analyzing the financial characteristics of the financial statements (Bhunia, et al., 2011).

Todays' businesses pay much attention to profitability and long-term business sustainability, which is the responsibility of investors and shareholders and direct and indirect stakeholder groups of an organization. There has been an increasing importance of sustainability than the previous three decades.

Simultaneously, the profitability of banks has become pivotal in the industry to ensure their affluence. The stability of the banking system is an economically viable condition that ensures stability in the economy, price level, and financial system. Feneir, (2016) stated that serious solvency or liquidity problems among many banks could cause "*a systematic banking crisis*," which is a devastating shock for any economy.

But focusing only on profit increases the tendency of creating harmful impacts on the society, the economy, and the environment by the current business activities in the recent past. Irreversible damage to the environment, land degradation, pollution, poor management of water resources and loss of biodiversity, coastal erosion, and inadequate industrial waste management; social issues such as poverty, malnutrition, and poor work ethics are the emerging challenges faced by the Sri Lankan economy (Goger, 2013).

Thus, the Global Reporting Initiative (GRI) has provided guidelines that countries may voluntarily follow to mitigate the harmful effects of the external environment from their business activities. Accordingly, the companies should make appropriate disclosures of these impacts in a suitable sustainability report annually. While adhering to these requirements, businesses publish sustainability reports voluntarily that provide offering valuable information to stakeholders.

These reports present organizational values and governance models and demonstrate the organization's strategy towards a sustainable global economy via the information published about the economic, environmental, and social impacts of their day-to-day activities (Global Reporting Initiative, 2017).

Stakeholders are looking forward to gaining knowledge about financial and non-financial aspects to make their investment decisions and purchase their products (Reddy & Gordonb, 2010). Thus, they demand better knowledge about how environmental, social, and economic impacts are applied to business strategies and decisions while also requiring compliance in daily operations (Amran & Ooi, 2014).

Senarathne & Liyanagedara, (2009) found an expectation gap between the information needs of stakeholders on sustainability reporting and the information disclosed in the annual reports of companies in the Sri Lankan context.

Less informative reports may demotivate the investors, which reduces the capital inflows for the banking system. It leads to a limit on the funds and the market value of the shares. Accordingly, there is a concern whether the contents of the sustainability reports of the banking and financial institutions can enhance their financial performance. Thus, the current study focused on analyzing the impact of the sustainability reporting framework on banking and financial institutions' financial performance.

2. LITERATURE REVIEW

As per the stakeholder theory, the purpose of a business is to maximize its profits and create value for the stakeholders (Altinay, 2016; Parmar, et al., 2010). The disclosure of sustainability reporting status increases the availability of information to its stakeholders to fulfill the firm's responsibilities towards its stakeholders, which is explained by the stakeholder theory (Caesaria & Basuki, 2017).

Managers use sustainability reports as a source to reduce their agency cost by trading the information in the efficient markets (stakeholders) to increase firm value and management incentives (Shamil, et al., 2014). According to Hahn & Kuhnen, (2013), stakeholder theory best explains the sustainability practice.

The responsibilities arising from the firm's social contracts through reporting on sustainability that the outsiders are accepted as legitimate are explained by the Legitimacy theory (Caesaria & Basuki, 2017). The survival of any organization is subject to the acceptance granted by society on its business operations. So, it is the responsibility of a company to behave legitimately to obtain acceptance from society. Sustainability reporting provides this legitimacy to the organizations by creating the right image in society (Hahn & Kuhnen, 2013). The linkage between legitimacy theory and corporate social responsibility disclosures is that company disclosure strategies always aim to affect social expectations or environmental events, which could seek legitimacy for their sustainability activities (Kilic & Kuzey, 2017).

In 1994, John Elkington introduced the Triple Bottom Line (TBL) concept to measure the performance of corporates in America based on three dynamics: profit, people, and the planet. The Triple Bottom Line (TBL) is the theory that recommends that companies commit not only to maximize their profits but also to focus on social and environmental concerns just as they do on profits. The TBL expects to measure a corporation's level of commitment to Corporate Social Responsibility (CSR) and its impact on the environment over time.

In finance, usually, it is considered the profit as the firm's bottom line. As per the TBL, companies must focus beyond the profit, such as social and environmental issues, to measure the full cost of conducting business; otherwise, the company cannot obtain the full picture of the company and unable to measure the internal and external impact created by the business.

According to TBL, companies should be working on these three bottom line areas simultaneously. Profit is the first line in TBL. The traditional measure of corporate profit can be done using the profit and loss (P&L) account, and the second TBL is People. It measures how organizations do social responsibilities throughout their operation. The planet is the final line and measures the environmental responsibility of a firm. TBL reporting can be an essential tool to support a firm's sustainability goals, but TBL's key challenge is to measure the social and environmental bottom line. But profitability is inherently quantitative, so it is easy to measure.

Corporate sustainability reporting has grown substantially over the past decade, that this practice can primarily benefit the businesses. The research conducted using the standard market model revealed no overall significant market reaction for the sustainability report's first-time release. Still, companies releasing a high-quality sustainability report have a more significant positive market reaction than the businesses releasing low-quality sustainability reports (Guidry & Patten, 2010).

Focusing on the society and environment by the companies and releasing a high-quality sustainability report (Guidry & Patten, 2010) can create long-term cost savings. And it develops goodwill, brand awareness, stakeholder satisfaction and enhances the capacity to attract more customers. Though the CSR activities incur an expenditure, those do not outweigh the benefits it creates for the organization (Hejase, et al., 2012). However, the impact of such sustainability reports on the firms' financial performance is a concern since it is bonded with cost factor and income factor.

A firm's financial performance and sustainability reporting aspects are two things that the public pays attention to determine its success and be sustainable and profitable (Karjati & Evawany, 2017). Many

researchers identified that GRI guidelines have a significant association with a successful sustainability reporting framework (Dissanayake, et al., 2019; Kilic & Kuzey, 2017).

Laskar, (2016) studied the impact of corporate sustainability reporting on firm performance in Asian countries, namely, Japan, South Korea, Indonesia, and India. It revealed a significant positive relationship between corporate sustainability, performance, and market to book value ratio. Research suggests that corporate sustainability reporting on firm value is more effective in developed countries than the developing countries. The study used firm size, leverage as control variables that may impact the company's financial performance. Giron, et al., (2020) also revealed the same results in the manufacturing sector based on 366 large Asian and African countries.

Weber, (2017) also found that sustainability in the financial sector does not harm their financial performance increases it among Chinese Banks. As the research finds a bi-directional effect, research findings suggest that Chinese banks should invest in corporate sustainability to improve their financial growth and re-invest slack resources in sustainability activities. Simultaneously, there has been a positive association between sustainability disclosures and numerous aspects of firm performance: operating cash flow to assets, working capital to total assets, retained earnings to total assets, asset backing per share, debt-servicing capacity, and capital expenditure relative to assets within top 100 listed companies on the ASX (Jones, et al., 2007). Reddy & Gordon, (2010) also found that sustainability reporting is statistically significant in explaining abnormal returns in Australian and New Zealand companies.

Motwani & Pandya, (2016) also concluded that community-related sustainability reporting has a significant impact on profitability. Their findings revealed that the overall sustainability reporting has an impact only to some extent since the employee, environmental, and governance-related sustainability reporting has no significant effect on profitability based on 103 companies listed in NSE. In contrast, based on the Indonesia Stock Exchange, Karjati & Evawany, (2017) revealed that the net profit margin, current ratio, and leverage do not affect sustainability reporting and firm value. Only the sustainability reporting median variable has a significant effect on firm value. Thus, the study results suggest that profitability ratio, liquidity, and leverage affect the firm value significantly through sustainability reporting.

A study based on 51 Brazilian listed companies also revealed a neutral relationship between corporate financial performance and disclosure quality of sustainability reporting (Ching, et al., 2017).

Aggarwal, (2013) has identified a mixed result that ranges from positive to negative relationships and even to significantly insignificant relationships depending on the measurement used to analyze the impact. The disclosure index score, independent sustainability ratings, dummy variables are indicating the issue of GRI report or members of popular sustainability indices for the measurement of sustainability reporting and cost of capital, accounting-based measures, market-based measures, or a mixture of these measures for the measurement of firm financial performance and usage of the control variables such as firm size, industry, and risk ranging the sample selection from a large or small sample in a developed or developing country. Even though the results vary from research to research, most of the research observed in this study stated that sustainability reporting practices positively impact firms' financial performance.

There have been few studies published within the Sri Lankan context. A study done based on 20 Sri Lankan banking, financing, and insurance listed companies revealed a moderately and positively, significantly, the correlation between the financial performance and quality sustainability reporting (Uthayakumara & Punchihewa, n.d.). Priyanka, et al., (n.d.) also revealed the same results and suggested to test the causal impact of these variables among the Sri Lankan companies. Parallaly, Athukorala & Tilakasiri, (2018) found that sustainability reporting has a significant positive impact on an organization financial performance. Though there has been complementary findings available in the international scope, there have been contradictory findings within the Sri Lankan context, which revealed a negative relationship between sustainability reporting and firms' financial performance, vice-versa (Abeysinghe & Basnayake, 2015; Sooriyaarachchi & Gunawardena, 2018; De Silva, 2018).

3. METHODOLOGY

Research Approach

It is essential to understand the ideal philosophy which should be implemented in research (Creswell, 2003). Research conducted based on scientific rules, theories, and conventions can be identified as positivist research. Such positivist researchers use deductive reasoning based on a specific theory to develop a concrete empirical result (Saunders, et al., 2002). Thus, it guides social research to adapt to a scientific method and test hypotheses as a quantitative form of analysis (Atkinson & Hammersley, 1994). The current research adheres to the '*positivist philosophy*' with a deductive research approach as an appropriate research method to answer the research problem.

Methods

Data and Sample

The Colombo Stock Exchange (CSE) consists of 290 companies representing 20 business sectors for 31st July 2019. Among all of these sectors, all the banking and finance sectors were selected as the study's population. And there are 70 companies listed under the banking and finance sector on the CSE. Accordingly, 51 listed banking and finance companies were selected on selective sampling and considered in the study. The secondary data was collected from 2014 to 2018 through annual reports.

Conceptual Framework

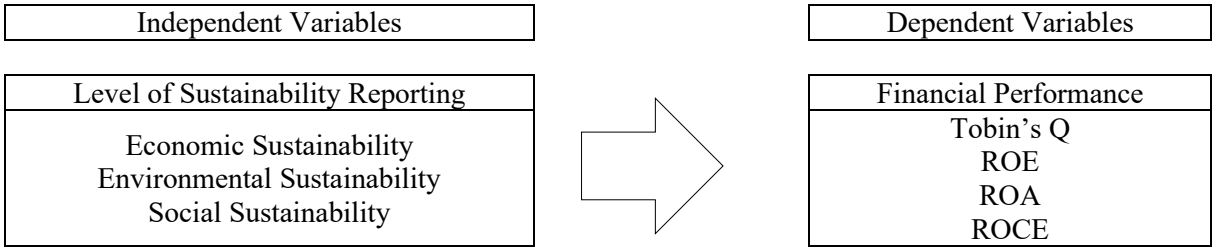

Figure 1: Conceptual Framework

Operationalization

Table 1: Operationalization of the Variables

Variables	Abbreviation	Measurement
Economic Sustainability	ES	The total score received from the GRI G4 index
Environmental Sustainability	ENS	The total score received from the GRI G4 index
Social Sustainability	SS	The total score received from the GRI G4 index
Return on Asset	ROA	Earnings before Interest and Tax / Total Asset
Return on Equity	ROE	Net Income / Total Equity
Return on Capital Employed	ROCE	Earnings Before Interest and Tax / Capital Employed
Tobin's Q	TQ	Market Value of Firm / Asset Value of Firm

Hypotheses

H_{1a}: There is a positive relationship between economic sustainability and financial performance.

H_{1b}: There is a positive relationship between environmental sustainability and financial performance.

H_{1a}: There is a positive relationship between social sustainability and financial performance.

Model Development

$$Model\ 01: TQ = \beta_0 + \beta_1 ES + \beta_2 ENS + \beta_4 SS + \mathcal{E}$$

$$Model\ 02: ROE = \beta_0 + \beta_1 ES + \beta_2 ENS + \beta_4 SS + \mathcal{E}$$

$$Model\ 03: ROA = \beta_0 + \beta_1 ES + \beta_2 ENS + \beta_4 SS + \mathcal{E}$$

$$Model\ 04: ROCE = \beta_0 + \beta_1 ES + \beta_2 ENS + \beta_4 SS + \mathcal{E}$$

Where,

β_0	=	Intercept (constant)
B_{1-4}	=	Coefficients
$\mathcal{E}$	=	Error Term

4. ANALYSIS OF DATA

Normal Distribution of Data

The consistency and accuracy of data (Olabode, et al., 2019) are essential to obtain an effective model free from spurious effects. Thus, the nature of the distribution of data was analyzed using the Jarqu-Bera test and Bartlett's Test.

Table 2: Jarque-Bera Statistic Results

Variable	Jarque-Bera	Probability	Decision
ES	3.108011	0.2114	P > 0.05 H_0 Accepted
ENS	59.33021	0.0000	P < 0.05 H_0 Rejected
SS	4.733002	0.0938	P > 0.05 H_0 Accepted
ROA	38.81058	0.0000	P < 0.05 H_0 Rejected
ROCE	2623.035	0.0000	P < 0.05 H_0 Rejected
ROE	3205.782	0.0000	P < 0.05 H_0 Rejected
TQ	445.1517	0.0000	P < 0.05H_0 Rejected

As per the results, only ES and SS variables follow the process of normal distribution. Thus, the box-cox transformation was applied, and natural log values have been considered for ENS, ROA, ROCE, ROE, and TQ for further analysis.

Bartlett's Test of Sphericity

Table 3: Bartlett's Test Results

Bartlett's Test of Sphericity	Approx. Chi-Square	189.8479
	df	21
	Sig.	.0000

This test is used to identify whether the variances are equal (homogeneous) for all the samples based on the variables' correlation matrix. The tested hypotheses are.

H_0: $\sigma_1^2 = \sigma_2^2 \ldots. \sigma_k^2$
H_1: $\sigma_1^2 \neq \sigma_2^2 \ldots. \sigma_k^2$

Accordingly, the test statistic and P-value (0.0000) < 0.05), reject null hypothesis. This result confirmed that the variances of at least two variables are different. Thus, using a control variable and testing One-Way ANOVA is not possible for the current data set.

Test of Stationarity of the Data

Unit root analysis was carried out using the Augmented Dickey-Fuller Test (ADF) and Phillips-Perron (PP) Test with a 5% critical level. The tested hypotheses are.

H_0: Data follows a unit root process (non-stationary)
H_1: Data does not follow a unit root process (stationary)

Table 4: Results of ADF and PP test

Variable	ADF Test Results		PP Test Results	
	I (0)	P-Value	I (0)	P-Value
ES	-5.8909	0.0000	-6.2188	0.0000
ENS	-7.4303	0.0000	-7.3654	0.0000
SS	-5.9248	0.0000	-5.9590	0.0000
ROA	-4.0797	0.0019	-4.0751	0.0020
ROCE	-8.3668	0.0000	-8.3670	0.0000
ROE	-8.5104	0.0000	-8.5106	0.0000
TQ	-6.1686	0.0000	-6.2931	0.0000

The ADF and PP test (Table 4) confirmed that all the data follows a stationary process at levels; I (0). Accordingly, it is possible to develop the Ordinary Least Square (OLS) regression models to identify these variables' relationships.

OLS regression Models Developed.

Model 01 – for ROA

The initial OLS regression results confirmed that the economic sustainability indicators and environmental sustainability indicators significantly influence the ROA of the listed banking and financial companies (P-Value, 0.0020 & 0.0267 < 0.05, respectively).

However, social sustainability indicators reveal an insignificant influence on ROA. Wald test was conducted on the coefficient of social sustainability with H_0: C (3) = 0 Vs. H_1: C (3) ≠ 0 and the results revealed that the null hypothesis could not be rejected. So, the parameter of social sustainability is equated to 'zero'; P-value (0.7168) > 0.05. Accordingly, it is possible to remove the variable without doing any harm to the model fit.

Table 5: OLS Regression Results for LN_ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECONOMIC	-2.8881	0.7519	-3.8413	0.0003
LN_ENV	0.3611	0.1561	2.3134	0.0238
C	-1.7206	0.5265	-3.2676	0.0017
R-squared	0.1964	Mean dependent var		-3.7135
Adjusted R-squared	0.1724	SD dependent var		1.3222
SE of regression	1.2029	Akaike info criterion		3.2492
Sum squared resid	96.9408	Schwarz criterion		3.3456
Log-likelihood	-110.7219	Hannan-Quinn criteria		3.2875
F-statistic	8.1862	Durbin-Watson stat		1.7310
Prob(F-statistic)	0.0007			

$$ROA = -1.7206 - 2.8881ES + 0.3611ENS + \varepsilon$$

Accordingly, the initial model was enhanced by using economic and environmental sustainability indicators. The results confirmed (Table 5) that the economic sustainability indicators have a negative but significant impact on determining firms' ROA. However, environmental sustainability indicators have a significantly positive effect on determining firms' ROA.

The residuals diagnostics for the OLS regression model have been tested to confirm the null existence of serial correlation, homogeneity of residuals, and normal distribution of residuals, respectively, using Breusch-Godfrey Serial Correlation LM Test, Breusch-Pagan-Godfrey Heteroskedasticity Test, and Jarque-Bera statistic for Residuals.

Breusch-Godfrey Serial Correlation LM Test indicated that the residuals are not serially correlated, and the model is free from spurious effects: P-value (0.2969) > 0.05. The Breusch-Pagan-Godfrey Heteroskedasticity Test states that the residuals are heteroscedastic, or the error variances are not equal: P-value (0.0129) < 0.05. However, the Jarque-Bera statistic for residuals also confirmed that the residuals are normally distributed: P-value (0.2871) > 0.05.

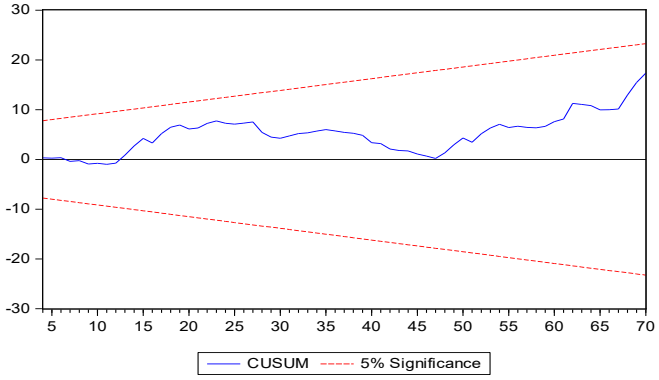

Figure 2: CUSUM Chart of Model 01-ROA

The CUSUM chart's plotted points are the cumulative sums (CUSUMs) of the deviations of each sample value from the target values. The chart illustrates upward and downward trends, and the plotted point are fluctuating around zero within the control limits. Accordingly, the process mean has shifted, and the process may be affected by special causes.

Model 02 – for Tobin's Q

The initial OLS regression results confirmed that the economic sustainability indicators significantly influence Tobin's Q of the listed banking and financial companies; (P-Value, 0.0039 < 0.05).

However, environmental, and social sustainability indicators reveal an insignificant influence on Tobin's Q. Wald test results also revealed that the null hypothesis *(H_0: C (2), (3) = 0)* could not be rejected. So, the parameters of environmental and social sustainability are equals to 'zero'; P-value (0.5360 & 0.2346 respectively) > 0.05. Accordingly, it is possible to remove the variable without doing any harm to the model fit.

So, the initial model was enhanced by using the environmental sustainability indicator. The results confirmed (Table 6) that the economic sustainability indicators have a negative but significant impact on determining firms' Tobin's Q.

Table 6: OLS Regression Results for Tobin's Q

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECONOMIC	-1.5983	0.5065	-3.1553	0.0024
C	-0.9387	0.2572	-3.6501	0.0005
R-squared	0.1277	Mean dependent var		-1.6848
Adjusted R-squared	0.1149	S.D. dependent var		0.8986
SE of regression	0.8454	Akaike info criterion		2.5302
Sum squared resid	48.6016	Schwarz criterion		2.5944
Log-likelihood	-86.5564	Hannan-Quinn criteria.		2.5557
F-statistic	9.9560	Durbin-Watson stat		1.7810
Prob(F-statistic)	0.0024			

$$TQ = -0.9387 - 1.5983ES + \varepsilon$$

Breusch-Godfrey Serial Correlation LM Test, Breusch-Pagan-Godfrey Heteroskedasticity Test, and Jarque-Bera statistic for Residuals have been conducted to confirm the behavior of residuals of the model. The results of the Breusch-Godfrey Serial Correlation LM Test indicated that the residuals are not serially correlated, and the model is free from spurious effects: P-value (0.6563) > 0.05. But Breusch-Pagan-Godfrey Heteroskedasticity Test states that the residuals are heteroscedastic, or the error variances are not equal: P-value (0.0382) < 0.05. However, the Jarque-Bera statistic for residuals also confirmed that the residuals are normally distributed: P-value (0.9067) > 0.05.

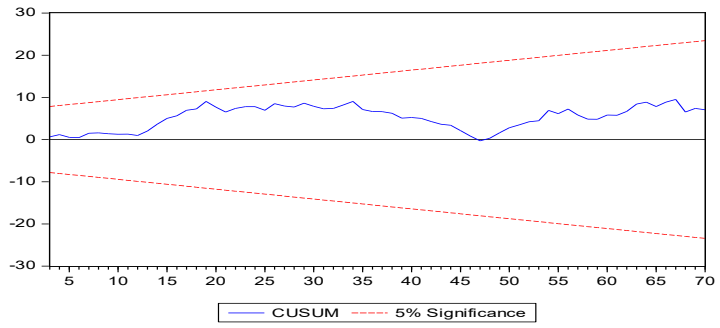

Table 7: CUSUM Chart of Model 02 – Tobin's Q

Similar to the Model 01, the plotted points of the CUSUM chart of model 02 illustrate upward and downward trends, and the plotted point are fluctuating around zero within the control limits. Accordingly, the process mean has shifted, and the process may be affected by special causes.

OLS Regression Model for ROCE and ROE

The OLS regression model developed to interpret LN_ROCE revealed that the impact of all the sustainability indicators is insignificant in determining the ROCE: P-value (0.2703, 0.7799, 0.8743) > 0.05. Further, the Wald test also accepted the H_0: C (1), (2), (3) = 0 and confirmed that the parameters of economic, environmental, and social sustainability indicators are equal to zero: P-value (0.2703, 0.7799, 0.8743 respectively) > 0.05 which confirm that removing the variables is suitable.

Parallelly, the OLS regression model developed to interpret LN_ROE also revealed that all the sustainability indicators are insignificant in determining the ROE of a firm: P-value (0.9907, 0.9373, 0.9569) > 0.05. Simultaneously, the Wald test also accepted the H_0: C (1), (2), (3) = 0 and confirmed that the parameters of economic, environmental, and social sustainability indicators are equal to zero: P-value (0.9907, 0.9373, 0.9569 respectively) > 0.05 which confirm that removing the variables is suitable.

Correlation Matrix

The correlation matrix confirmed that only the economic sustainability indicators are significantly influencing determining the firm's ROA and Tobin's Q; P-value (0.002 & 0.002 respectively) < 0.05. Further, it revealed negative and moderate influence from economic sustainability indicators on firm performance. However, none of the variables are impacting to determine the firm's ROE and ROCE.

Granger Causality Test

The observed variables' usefulness and the existence of the causal relationship among the variables have been analyzed through the Granger Causality Test (Leamer, 1985). The test results indicated the existence of bidirectional causality running from economic sustainability to LN_ROA when two lags are applied at 5% levels of significance. Parallelly, among independent variables, a bidirectional causality exists between LN_ROA and LN_ROE and LN_TQ and LN_ROE.

Also, a unidirectional causality is running from economic sustainability to LN_TQ, from LN_ROA to environmental sustainability, from LN_ROE to environmental sustainability, social sustainability to LN_ROA. Simultaneously, among the independent variables, a unidirectional causality is running from economic sustainability to environmental sustainability. And among dependent variables, a unidirectional causality is running from LN_ROA to LN_TQ and form LN_ROCE to LN_TQ.

5. CONCLUSION

Many prior literatures work confirmed a positive relationship between sustainability reporting and firms' financial performance (Laskar, 2016; Giron, et al., 2020; Weber, 2017). Parallelly among the Sri Lankan listed companies, there have been mixed results observed throughout the past few decades (Uthayakumara & Punchihewa, n.d.; Priyanka, et al., n.d.; Athukorala & Tilakasiri, 2018; Abeysinghe & Basnayake, 2015; Sooriyaarachchi & Gunawardena, 2018; De Silva, 2018). Thus, the current study directed to analyze the impact of sustainability reporting on the firms' financial performance by drawing special attention to all the banking and finance sector listed companies in Sri Lanka. The findings revealed that economic sustainability indicators are significantly impacting to the firms' financial indicators such as ROA and Tobin's Q, and it revealed a negative impact on the firms' profitability. This emphasis that enhancement of the economic sustainability indicators could significantly reduce the Return on Assets of the Banking and Financial institutions in Sri Lanka. The correlation matrix also confirms the same results stating that the economic sustainability indicators are significantly and moderately significant with ROA and Tobin's Q.

Parallelly, environmental sustainability also shows a significant positive influence on ROA. However, the social sustainability indicators are insignificant when determining the financial performance of Banking and Financial sector businesses. Thus, it emphasizes that further the investments in environmental sustainability could cause to increase the profitability of Banking and Financial institutions in Sri Lanka.

Simultaneously, all the variables show an insignificant result on ROCE and ROE. CUSUM chart confirms that, though the plotted points based on the derived models show upward and downward movements, the movements are mostly around zero and within the control limits. Thus, it can be concluded that exceptional cases can impact the financial performance of the banking and financial institutions.

As per a suggestion of Priyanka, et al., (n.d.), the granger causality was conducted to identify the causality relationship among the behavior. The causality results confirm a bidirectional causality is running from economic sustainability to ROA. Also, it revealed a unidirectional causality running from economic sustainability to LN_TQ, from LN_ROA to environmental sustainability, from LN_ROE to environmental sustainability, social sustainability to LN_ROA. Thus, conclude that economic sustainability and social sustainability precedence to enhance the profitability (ROA and Tobin's Q).

Vice versa, higher profitability of the firms (ROA and ROE) can motivate environmental sustainability attempts.

Accordingly, among the banking and finance sector companies, economic sustainability is highly significant in determining the firm's performance and creates a causal relationship among these variables. Parallelly, environmental sustainability also adds value to the better performance of their assets. However, sustainability measures are less effective in equity performance measures.

This study's findings can be applied to the banking and finance sector firms for their profit optimizations. Since a persistent business environment is challenging, the banking and financial sectors can focus on economic sustainability and environmental sustainability variables to enhance their assets' performance.

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